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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/063,414	04/21/2002	Sharon Flank	08228/1203278-US5	9904
39179	7590	11/09/2006	EXAMINER	
DARBY & DARBY, P.C. P.O. BOX 5257 NEW YORK, NY 10150-5257			COBY, FRANTZ	
			ART UNIT	PAPER NUMBER
			2161	

DATE MAILED: 11/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/063,414

Applicant(s)

FLANK ET AL.

Examiner

Frantz Coby

Art Unit

2161

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

This is in response to Applicant's Request for Continuing Examination (RCE) filed on April 21, 2006 in which claims 1, 4, 7, 10 were amended and claims 16-17 were added.

Status of Claims

Claims 1-17 are pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, the specification recites, only, in paragraph 0115 "Use a semantic net hierarchy, combined with term frequency in a reference corpus, to identify the lowest term in the hierarchy that subsumes all the queries". However, the above portion does not amount to what the applicant intent for "a semantic net hierarchy" to be. Therefore, the term "semantic net hierarchy", although mention in paragraph 0015 of the specification, but was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that

the inventor(s), at the time the application was filed, had possession of the claimed invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims recite the features of "identifying, using a semantic net hierarchy, a lowest-level term in the hierarchy that subsumes all queries in a grouping of search requests"; "identifying, using a semantic net hierarchy, a lowest-level linguistic term in the hierarchy that subsumes all queries in a grouping of search requests"; and identifying, using a semantic net hierarchy, a lowest-level linguistic term in the hierarchy that subsumes all of the expanded query metadata results in the grouping of expanded query metadata results". Because "a semantic net hierarchy" is extremely necessary, according to paragraph 0015 of the specification and since the specification does not give a clear idea as to what a "a semantic net hierarchy" should be or how a "a semantic hierarchy" should be structured, that therefore, render the claims vague and indefinite; and render it unable for the claimed features that depend on the "a semantic net hierarchy" to realize.

As best understood by the Examiner, the claims are rejected as set forth below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Desai et al. U.S. Patent no. 6,072,904 in view of Schultz U.S. Patent no. 5,721,902 and further in view of Voorhees et al. U.S. Patent no. 5,864,845.

As per claims 1, 16-17, Desai et al. disclose "a method for use with a system storing digital media records and comprising a search engine searching said stored digital media records, the method comprising the steps of: receiving search requests from users; logging the search requests, using a semantic net hierarchy, a lowest-level term in the hierarchy that subsumes all of the queries in a grouping of search requests', communicating the identified term to a user" by providing a graphical based image retrieval system (See Desai et al. Abstract, Col. 2, lines 22-38., Col. 4, lines 34-60; Col. 5, lines 56-63). The applicant should duly note that in Desai, user expressions of interest are expressed as image (query) that a user has interest in finding and is entered to be compared against clusters of images stored in the database.

It is noted, however, Desai et al. did not specifically detail the aspect of "expanding the search requests" as recited in the instant claims 1 , 4, 7 and 10. On the other hand, Schultz achieved the aforementioned limitations by providing an expansion of query terms using part of speech tagging (See Schultz Title, Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify image retrieval system of Desai et al. by incorporating, in the search mechanism of Desai et al. the query expansion method of Schultz. The motivation being to provide a searching/retrieval system which can query a library or database and identify not only text documents, but also multi-media files stores on the library of database that are relevant to the query (See Schultz Col. 2, lines 57-61).

It is further noted, that neither Desai nor Schultz specifically detail the aspects of "applying a statistical clustering algorithm, thereby grouping similar search requests together based on content of the expanded logged search requests" as recited in the recited claim. Voorhees et al. however, disclose the aforementioned claimed features by providing a system for World Wide Web searches utilizing a multiple search engine query clustering strategy (See Voorhees et al. Title; Abstract', Col. 2, line 17-Col. 4, line 50).

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modified the combination to Desai and Schultz above by incorporating the mechanism for query clustering disclose by Voorhees into the combined searching/retrieval system of Desai/Schultz. The motivation being to provide a search retrieval system for combining the results of separate search engines into a single integrated ranked list of pages in response to a query. Thereby, improved the effectiveness of a single text retrieval system despite the collection being physically separated (See Voorhees Col. 1 , line 60-Col. 2, line 22).

As per claims 4, 7 and 10, all the limitations of these claims have been noted in the rejection of claims 1, 16-17. They are therefore rejected as set forth above.

As per claims 2-3, most of the limitations of these claims have been noted in the rejection of claims 1, 16-17. Applicant's attention is directed to the rejection of claim 1 above. In addition, Schultz discloses the claimed features of "wherein the expanding is

performed using a thesaurus "wherein the expanding is performed using a semantic net comprising synonyms and super-terms" (See Schultz Figures 4A-4C) especially "Thesaurus" and "Dictionary".

As per claims 5-6, most of the limitations of these claims have been noted in the rejection of claims 4, 7 and 10. Applicant's attention is directed to the rejection of claim 4 above. In addition, Schultz discloses the claimed features of "wherein the expanding is performed using a thesaurus", "wherein the expanding is performed using a semantic net comprising synonyms and super-terms" (See Schultz Figures 4A-4C) especially "Thesaurus" and "Dictionary".

As per claims 8-9, most of the limitations of these claims have been noted in the rejection of claims 4, 7 and 10. Applicant's attention is directed to the rejection of claim 7 above. In addition, Schultz discloses the claimed features of "wherein the expanding is performed using a thesaurus" "wherein the expanding is performed using a semantic net comprising synonyms and super-terms" (See Schultz Figures 4A-4C) especially "Thesaurus" and "Dictionary".

As per claims 11-12, most of the limitations of these claims have been noted in the rejection of claim 10. Applicant's attention is directed to the rejection of claim 10 above. In addition, Schultz discloses the claimed features of "wherein the expanding is

performed using a thesaurus', "wherein the expanding is performed using a semantic net comprising synonyms and super-terms" (See Schultz Figures MAMC) especially "Thesaurus" and "Dictionary".

Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Desai et al. U.S. Patent no. 6,072,904 in view of Schultz U.S. Patent no. 5,721,902 and Voorhees et al. U.S. Patent 5,864,845 and further in view of Wiser et al. U.S. Patent no. 6,385,596.

As per claims 13-15, most of the limitations of these claims have been noted in the rejection of claim 10 above. Applicant's attention is directed to the rejection of claim 10.

It is noted, however, neither Desai et al. nor Schultz disclose the aspects of "wherein a user expressing interest in a selected 'digital media record comprises the user placing the selected digital media record into an online shopping cad"; "wherein a user expressing interest in a selected digital media record comprise: the user purchasing rights to use the selected digital media record", 'wherein a user expressing interest in a selected digital media record comprises the user placing the selected digital media record into an online projects folder or other work space". On the other hand, Wiser achieved the aforementioned claimed features by providing a secure online music distribution system including a media licensing mechanism as well as a payment mechanism to allow online purchasing of digital media (Se: Wiser et al. Figures 6A-6B).

Art Unit: 2161

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the combination of Desai et al. and Schultz by further incorporating the online music distribution teachings of Wiser et al. because that would have enhanced the versatility of Desai's et al. image retrieval method by allowing it to be applied in an electronic commerce environment.

Remarks

The Applicant argued that, "Desai does not appear to disclose or use "a semantic net hierarchy" and that "Desai apparently fails to disclose or suggest identifying a lowest level linguistic term". However, the Examiner disagrees with the preceding argument, because the claims are rejected above as best understood by the Examiner since the specification, although makes a single mention the term "semantic net hierarchy", in paragraph 0015 of the specification, but the term "semantic net hierarchy" was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Also, since the term of "a semantic net hierarchy" is not understood, and because "a semantic net hierarchy" is extremely necessary, according to paragraph 0015 of the specification and since the specification does not give a clear idea as to what a "a semantic net hierarchy" should be or how a "a semantic hierarchy" should be structured, that therefore, render the claims vague and indefinite; and render it unable for the claimed features that depend on the "a semantic net hierarchy" to realize. Therefore, as best understood by the Examiner, the references teach

identifying in lowest-level term in a hierarchy that subsumes all queries in a grouping of search request because all the references can at least, receive a query search a database and combine the results and provide the results to a user.

The Applicant also argued, that "Schultz apparently fails to disclose or suggest expanding a search result, and thus fails to disclose or suggest expanding metadata associated with selected media records that are defined by search results, as encompassed by independent Claim 4. Desai and Voorhees fail to overcome this deficiency of Schultz.". However, the Examiner disagrees with this line of argument because the claim recites "expanding the metadata" and Schultz provides an expansion of query terms using part of speech tagging (See Schultz Title, Abstract). In particular, Schultz provides expansion of query word as well as query refinement through adjustment of query weight. Therefore, after assignment of weight to a query, any word expansion to the query results to query result expansion.

The Applicant argued, "Desai does not disclose or suggest identifying a lowest-level term that subsumes queries in a grouping of search requests". The Examiner respectfully disagrees with the preceding argument because Desai achieves the aforementioned claimed feature by providing a graphical based image retrieval system (See Desai et al. Abstract, Col. 2, lines 22-38; Col. 4, lines 34-60; Col. 5, lines 56-63) wherein a categorization is applied on the content of the images in the database including an image retrieval system that allow a user to enter a query as an image and

the query is ordered in a grouping of search queries by the retrieval system through a clustering methodology in which images (queries) that have similar characterizations are identified (See Desai Col. 2, lines 22-38).

The Applicant also argued, "applicants respectfully disagree that Voorhees discloses the amended limitation of applying a statistical clustering algorithm to the logged search requests, thereby grouping similar search requests together, as that limitation is used in the amended independent claims. Voorhees discloses training the computer for each search engine by clustering training queries and building cluster canroids." (Voorhees, col. 2, lines 29-30.) Such training queries do not disclose or suggest applying a statistical clustering algorithm to logged search requests for which a user has expressed interest in a selected digital media record, as required by original independent Claim 10 and now clarified independent Claims 1, 4, and 7". However, it seems that the Applicant had partially considered the Voorhees reference (only col. 2, lines 29-30) while the Office Action indicated that the claims "Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Desai et al. U.S. Patent no. 6,072,904 in view of Schultz U.S. Patent no. 5,721,902 and further in view of Voorhees et al. U.S. Patent no. 5,864,845". From the above, the entire Voorhees et al. U.S. Patent no. 5,864,845 should be consider, and that Voorhees et al. U.S. Patent no. 5,864,845 does disclose the claimed feature of applying a statistical clustering algorithm to the logged search requests, thereby grouping similar search requests together by forming a single link list of search results (See Voorhees (Col. 1, lines 60-65) and the

Art Unit: 2161

method utilizes a particular application of algorithms developed to combine the results of searched on potentially disjoint databases (See Voorhees Col. 2, lines 5-16).

Therefore, Voorhees is clear on the disclosure of the claimed feature of applying a statistical clustering algorithm to the logged search requests, thereby grouping similar search requests together.

The applicant argued, Applicants also respectfully disagree that one of ordinary skill would have been motivated to combine Desai and Voorhees. The OA indicates that the motivation would be to provide a search retrieval system for combining the results of separate search engines into a single integrated ranked list of pages in response to a query. Desai requires that the retrieval system characterizes edge content of the target image, using the same techniques employed to characterize the images in the database." (Desai, col. 2, lines 26-28.) Thus, the uniform retrieval system is needed. In contrast, Voorhees is directed to an automatic method for facilitating World Wide Web Searches by exploiting the differences in the search results of multiple search engines "(Voorhees, col. 1, lines 8-10.) Thus, different retrieval systems are needed. Further, Desai states that this invention is premised on the assumption that the advantages gained by the increased speed of retrieval outweigh the disadvantages caused by a potentially erroneous retrieval." (Desai, col. 4, lines 4-6.)

In contrast, Voorhees states that its purpose is to produce a single list that is more accurate than any of the individual lists from which it is built. "Voorhees, col. 1, lines 10-12.) Modifying either reference by combining with the other reference would

render each unsatisfactory for its intended purpose. (See MPEP 2143.01.) Thus, one of ordinary skill would not be motivated to combine Desai and Voorhees.” The Examiner respectfully submits, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Further, it has been held that a prior art reference must either be in the field of applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, It would have been obvious to one of ordinary skill in the art at the time of the invention to further modified the combination to Desai and Shultz above by incorporating the mechanism for query clustering disclose by Voorhees into the combined searching/retrieval system of Desai/Schultz. The motivation being to provide a search retrieval system for combining the results of separate search engines into a single integrated ranked list of pages in response to a query. Thereby, improved the effectiveness of a single text retrieval system despite the collection being physically separated (See Voorhees Col. 1, line 60-Col. 2, line 22).

In response to applicant's argument that “Schultz's feature of searching an index datable search terms with both text documents and multi-media records, does not provide motivation to combine Schultz's query expansion teaching with Desai”, the

Art Unit: 2161

examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, In this case, It would have been obvious to one of ordinary skill in the art at the time of the invention to further modified the combination to Desai and Shultz above by incorporating the mechanism for query clustering disclose by Voorhees into the combined searching/retrieval system of Desai/Schultz. The motivation being to provide a search retrieval system for combining the results of separate search engines into a single integrated ranked list of pages in response to a query. Thereby, improved the effectiveness of a single text retrieval system despite the collection being physically separated (See Voorhees Col. 1, line 60-Col. 2, line 22).

The Applicant further that "Voorhees performs clustering based on search results, and does not cluster based on search queries". The Examiner respectfully submits that since Voorhees performs clustering based on search results and search results are based on queries, by transitivity, Voorhees performs clustering based on queries.

Last, the Applicant argued that, "Voorhees fails to disclose or suggest applying a statistical clustering algorithm to the expanded logged search requests based on content of the expanded logged search requests, thereby grouping similar search requests together, as recited in Claim 1, and similar features recited in independent Claims 7 and 10. Applicants further note that Voorhees fails to disclose or suggest selecting a subset of search requests prior to clustering. In particular, Voorhees fails to disclose or suggest applying a statistical clustering algorithm to the expanded logged search requests based on content of the expanded logged search requests, wherein the search result for the logged search requests is empty, as encompassed by Claim 7. Voorhees further fails to disclose or suggest applying a clustering algorithm to search requests whose corresponding results received expressions of interest from users. Accordingly, Voorhees fails to disclose or suggest performing, by the search engine, searches based upon the search requests, fielding respective search results, each search result defining selected digital media records, receiving expressions of interest from users with respect to selected digital media records, logging the search requests for which a user has expressed interest in a selected digital media record, expanding the logged search requests, and applying a statistical clustering algorithm to the expanded logged search requests based on content the expanded logged search requests, as recited in independent Claim 10. Desai and Schultz fail to overcome these deficiencies of Voorhees". The Examiner respectfully submits that Voorhees et al. however, disclose the aforementioned claimed features by providing a system for World Wide Web searches utilizing a multiple search engine query clustering strategy (See

Art Unit: 2161

Voorhees et al. Title; Abstract', Col. 2, line 17-Col. 4, line 50); wherein a query fusion strategy would have been obvious to one of ordinary skill in the art at the time of the invention to be used for the purpose of further modifying the combination to Desai and Shultz above by incorporating the mechanism for query clustering disclose by Voorhees into the combined searching/retrieval system of Desai/Schultz. The motivation being to provide a search retrieval system for combining the results of separate search engines into a single integrated ranked list of pages in response to a query. Thereby, improved the effectiveness of a single text retrieval system despite the collection being physically separated (See Voorhees Col. 1 , line 60-Col. 2, line 22).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frantz Coby whose telephone number is 571 272 4017. The examiner can normally be reached on Monday-Friday 9:00AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571 272 4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

November 4, 2006


FRANTZ COBY
PRIMARY EXAMINER